

## ABSTRACT

This invention proposes a feature based data structure for computer manikin that is constructed from the scanned data of common 3D body scanners. The scanned  
5 data is first segmented into six parts and then encoded into range images. Feature recognition algorithms are developed and coded into computer algorithms. The software system can automatically recognize the important human feature points and feature curves. The  
10 computer manikin is constructed based on the interpolation between the feature curves. The manikin has geodetic latitudinal and longitudinal curves that pass through the geometric feature points of human body. The geodetic coordination contains all the important  
15 features that can be extracted as needed for apparel or ergonomic design, medical researches, and movie amusement industry.